REMARKS

Claims 1-6 have been cancelled, and the rejections thereof rendered moot.

Claim Rejection based upon Deepa et al.

Claims 15-17 and 20-22 stand rejected under 35 U.S.C. § 102(e) as anticipated by United States Patent No. 6,375,910, issued to Deepa et al. in 2002. Claims 18-19 and 23-24 were rejected under 35 U.S.C. § 103 as unpatentable over Deepa et al.

Applicants' catalytic converter comprises a cordierite substrate having an applied zirconium phosphate layer. Substrates formed of cordierite are characterized by microcracks that lead to degradation of the substrate during operation, page 3, lines 9-17. Applicants' have found that a coating of zirconium phosphate applied to the cordierite fills the microcracks and prevents them from expanding, without adversely affecting catalyst performance.

Deepa et al. describes a carrier formed of cordierite, col. 6, lines 37-38, and col. 7, line 7. With respect to zirconium phosphate, the rejection points to the disclosure at col. 8, lines 41-52. The disclosure in col. 8 is directed to alternate refractory materials for the carrier, corresponding to a substrate in Applicants' invention, see carrier member 12 in Fig. 1 and col. 14, line 61. Nothing in col. 8, or anywhere else in Deepa et al., describes a zirconium phosphate layer applied to the substrate. Thus, Deepa et al. cannot point to the coefficient of thermal expansion and other properties that allow zirconium phosphate to fill microcracks in the cordierite, but not expand when heated to operating temperatures, thereby enhancing the structural integrity and thermal durability of the substrate, see page 9, lines 6-11. . Without these features, Deepa et al. does not anticipate, or even suggest Applicants' invention.

Claim 15 is directed to Applicants' catalytic converter that includes a substrate comprising cordierite and a zirconium phosphate layer disposed on the substrate. Deepa et al. discloses a substrate composed of cordierite. However, Deepa does not disclose a zirconium phosphate coating to extend the useful life of a cordierite substrate. Therefore, Deepa et al. does not teach, or even suggest, Applicants' invention in claim 15.

Claims 17-19 are dependent upon claim 15 and so not taught or suggested by Deepa et al. for the reasons set forth with regard to that claim.

Claim 20 is directed to Applicants' catalyst substrate that includes a cordierite substrate material and a zirconium phosphate layer disposed thereon. Fro the reasons set forth above, Deepa et al. does not show a cordierite substrate material having a zirconium phosphate layer, and so does not teach or suggest Applicants' invention in claim 20, or claims 21-24 dependent thereon.

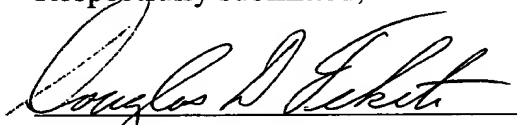
Accordingly, it is respectfully requested that the rejection of the claims 15-24 based upon Deepa et al. be reconsidered and withdrawn, and that the claims be allowed.

Conclusion

It is believed, in view of the cancellation of claims and remarks herein, that all grounds of rejection of the remaining claims have been addressed and overcome, and that all claims presently in the case are in condition for allowance. If it would further prosecution of the application, the Examiner is urged to contact the undersigned at the phone number provided.

The Commissioner is hereby authorized to charge any fees associated with this communication to Deposit Account No. 50-0831.

Respectfully submitted,



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